Claims

1. A matrix-type display apparatus which drives a display panel including a plurality of pixels disposed in matrix form and displays an image, characterized by including:

a converting means for γ-converting an input video signal, using n (which is an integer of two or above) pairs of γ-characteristics which are made up of first and second γ-characteristics different from each other; and

a selecting means for selecting one pair of γ-characteristics from among the n pairs of γ-characteristics according to a transmittance to be used for display, and selecting an output supplied to the display panel from among the 2n outputs which are γ-corrected by the converting means, so that a first distribution area ratio of pixels driven by the video signal γ-corrected by use of the first γ-characteristic of the selected pairs of γ-characteristics and a second distribution area ratio of pixels driven by the video signal γ-corrected by use of the second γ-characteristic of the selected pairs of γ-characteristics are equal to a distribution area ratio specified in advance for the selected pairs of γ-characteristics.

2. The matrix-type display apparatus according to claim 1, characterized in that the selecting means selects an output supplied to the display panel from among the 2n outputs which

are γ-corrected by the converting means, so that the first distribution area ratio and the second distribution area ratio are equal to the distribution area ratio in a block unit of (n+1) pixels per block.

3. The matrix-type display apparatus according to claim 2, characterized in that the first distribution area ratio and the second distribution area ratio for each pair of γ-characteristics are selected out of k/(n+1) and (1-k)/(n+1), if k is an integer of one to n.

4. The matrix-type display apparatus according to claim 1, characterized in that:

each pixel of the display panel is made up of, as one pixel, a first sub-pixel which has a first pixel area Sa and a second sub-pixel which has a second pixel area Sb (=m $\times$Sa, herein, m$>$1); and

the selecting means selects an output supplied to the display panel from among the 2n outputs which are γ-corrected by the converting means, so that the first distribution area ratio and the second distribution area ratio are equal to the distribution area ratio in a block unit of the one pixel per block.

5. The matrix-type display apparatus according to claim 4, characterized in that the first distribution area ratio

and the second γ-distribution area ratio for each pair of γ-characteristics are selected out of 1/(m+1) and m/(m+1).

6. The matrix-type display apparatus according to claim 5, characterized in that the second pixel area Sb satisfies the relation of $1.5Sa \leqq Sb \leqq 3Sa$.

7. The matrix-type display apparatus according to claim 1, characterized in that:

each pixel of the display panel is made up of, as one pixel, a first sub-pixel which has a first pixel area Sa and a second sub-pixel which has a second pixel area Sb (=m $\times$Sa, herein, $m>1$); and

the selecting means selects an output supplied to the display panel from among the 2n outputs which are γ-corrected using each γ-characteristic by the converting means, so that the first distribution area ratio and the second distribution area ratio are equal to the distribution area ratio in a block unit of the two pixels per block.

8. The matrix-type display apparatus according to claim 7, characterized in that the first distribution area ratio and the second γ-distribution area ratio for each pair of γ-characteristics are selected from among 1/(2+2m), m/(2+2m), 2/(2+2m), (1+m)/(2+2m), 2m/(2+2m), (2+m)/(2+2m), and (2m+1)/(2+2m).

9. The matrix-type display apparatus according to claim 8, characterized in that the second pixel area Sb satisfies the relation of $1.2Sa \leqq Sb \leqq 2Sa$.

10. The matrix-type display apparatus according to any of claims 1 to 9, characterized in that the selecting means selects an output supplied to the display panel from among the 2n outputs which are γ-corrected by the converting means, in a unit of one pixel made up of an R-pixel, a G-pixel and a B-pixel.

11. The matrix-type display apparatus according to any of claims 1 to 9, characterized in that the selecting means selects an output supplied to the display panel from among the 2n outputs which are γ-corrected by the converting means, for each of an R-pixel, a G-pixel and a B-pixel which are each set as one pixel.

12. The matrix-type display apparatus according to any of claims 1 to 11, characterized in that the display panel is a liquid-crystal display panel.

13. A driving method for a matrix-type display apparatus which drives a display panel including a plurality of pixels disposed in matrix form and displays an image, characterized

by including:

a converting step of γ-converting an input video signal, using n (which is an integer of two or above) pairs of γ-characteristics which are made up of first and second γ-characteristics different from each other; and

a selecting step of selecting one pair of γ-characteristics from among the n pairs of γ-characteristics according to a transmittance to be used for display, and selecting an output supplied to the display panel from among the 2n outputs which are γ-corrected in the converting step, so that a first distribution area ratio of pixels driven by the video signal γ-corrected by use of the first γ-characteristic of the selected pairs of γ-characteristics and a second distribution area ratio of pixels driven by the video signal γ-corrected by use of the second γ-characteristic of the selected pairs of γ-characteristics are equal to a distribution area ratio specified in advance for the selected pairs of γ-characteristics.